

WHAT IS CLAIMED IS:

1 1. A discharging unit for discharging a photosensitive material comprising:
2 a body having a first face facing a substrate, the substrate including a plurality of coating
3 areas on which a photosensitive material is coated;
4 at least an inlet portion disposed on a portion of the body, the photosensitive material
5 being provided into the body through the inlet portion; and
6 at least an outlet portion disposed on the first face of the body, the outlet portion
7 rendering the photosensitive material discharge onto the coating area.

1 2. The discharging unit of claim 1, further comprising an outlet divider, the outlet
2 divider dividing the outlet portion into a plurality of sub-outlets for controlling a stream direction
3 of the photosensitive material, so that the photosensitive material is only discharged toward the
4 coating area.

1 3. The discharging unit of claim 2, wherein the body includes a containing space to
2 contain the photosensitive material therein, the inlet portion being disposed on a second face of
3 the body opposite to the first face.

1 4. The discharging unit of claim 3, wherein the outlet portion is connected with the
2 containing space, and has a slit shape having a length longer than a width thereof.

1 5. The discharging unit of claim 4, wherein the length of the outlet portion is
2 identical to a width of the coating area.

1 6. The discharging unit of claim 4, wherein the outlet divider is protruded from the
2 first face of the body into the containing space, so that the containing space is divided into a
3 plurality of split containing spaces around the outlet portion.

1 7. The discharging unit of claim 1, wherein the body includes a plurality of
2 containing spaces to individually contain the photosensitive material therein, the inlet portion
3 being disposed on a second face opposite to the first face of the body individually corresponding
4 to each of the containing spaces, for thereby individually providing the photosensitive material
5 into the plurality of containing spaces, and the outlet portion being disposed individually
6 corresponding to each of the containing space, for thereby individually discharging the
7 photosensitive material from each of the containing spaces .

1 8. The discharging unit of claim 7, wherein the outlet portion has a slit shape having
2 a length longer than a width thereof.

1 9. The discharging unit of claim 8, wherein the length of the outlet portion is
2 identical to a width of the coating area.

1 10. A discharging unit for discharging a photosensitive material comprising:
2 a plurality of bodies, each of the bodies having a first face facing a substrate, the substrate
3 including a plurality of coating areas on which a photosensitive material is coated;
4 an inlet portion disposed on a portion of each of the bodies, the photosensitive material
5 being provided into each of the bodies through the inlet portion;

6 an outlet portion disposed on the first face of each of the bodies, the outlet portion
7 rendering the photosensitive material discharge onto the coating area; and
8 at least a spacer block, the spacer block combining the bodies with each other, so that the
9 plurality of the bodies operates together with each other.

1 11. The discharging unit of claim 10, wherein each of the bodies includes a
2 containing space to contain the photosensitive material therein, the inlet portion being disposed
3 on a second face of the body opposite to the first face.

1 12. The discharging unit of claim 11, wherein the outlet portion is connected with the
2 containing space, and has a slit shape having a length longer than a width thereof.

1 13. The discharging unit of claim 12, wherein the length of the outlet portion is
2 identical to a width of the coating area.

1 14. A coater for coating a photosensitive layer on a substrate comprising:
2 a supporting unit supporting a mother substrate having a plurality of unit substrates on
3 which a photosensitive material is coated;
4 a discharging unit discharging the photosensitive material onto the substrate, the
5 discharging unit including a) a plurality of bodies having a first face facing the mother substrate,
6 b) an inlet portion disposed on a portion of each body, the photosensitive material being provided
7 into the body through the inlet portion, c) an outlet portion disposed on a first face of each of the
8 bodies, the photosensitive material being discharged onto the unit substrate through the outlet

portion, and d) a combining part combining the bodies each other, the plurality of the bodies operating together with each other;

a supplying unit supplying the photosensitive material to the discharging unit; and

a transferring unit transferring the discharging unit relative to the support.

15. The coater of claim 14, wherein each of the bodies has a containing space for containing the photosensitive material therein, the inlet portion is disposed on a second face opposite to the first face, and the photosensitive material being provided into the containing space through the inlet portion.

16. The coater of claim 15, wherein the outlet portion is connected with the containing space, and includes a slit shape having a length longer than a width thereof.

17. The coater of claim 16, wherein the length of the outlet is identical to a width of the unit substrate.

18. A coater for coating a photosensitive layer comprising:
a supporting unit supporting a mother substrate having a plurality of unit substrates on which a photosensitive material is coated;
a discharging unit including a) a body having a first face facing the mother substrate, b) an inlet portion disposed on a portion of the body, the photosensitive material being provided into the body through the inlet portion, and c) an outlet portion disposed on a first face of the body, the photosensitive material being discharged onto the unit substrate through the outlet portion;

a supplying unit supplying the photosensitive material to the discharging unit; and
a transferring unit transferring the discharging unit relative to the support.

19. The coater of claim 18, further comprising an outlet divider, the outlet divider
dividing the outlet portion of the coating unit onto a plurality of sub-outlets for controlling a flow
direction of the photosensitive material, so that the photosensitive material is only discharged
toward the unit substrate.

20. The coater of claim 19, wherein the body has a containing space for containing
the photosensitive material therein, the inlet portion is disposed on a second face opposite to the
first face, and the photosensitive material being provided into the containing space through the
inlet portion.

21. The coater of claim 20, wherein the outlet portion is connected with the
containing space, and includes a slit shape having a length longer than a width thereof.

22. The coater of claim 21, wherein the length of the outlet is identical to a width of
the unit substrate.

23. The coater of claim 20, wherein the outlet divider is protruded from the first face
of the body into the containing space, so that the containing space is divided into a plurality of
split containing spaces around the outlet portion.

1 24. The coater of claim 18, wherein the body includes a plurality of containing spaces
2 to individually contain the photosensitive material therein, the inlet portion being disposed on a
3 second face opposite to the first face of the body individually corresponding to each of the
4 containing spaces, for thereby individually providing the photosensitive material into the
5 plurality of containing spaces, and the outlet portion being disposed individually corresponding
6 to each of the containing space, for thereby individually discharging the photosensitive material
7 from each of the containing spaces .

1 25. The coater of claim 24, wherein the outlet portion has a slit shape having a length
2 longer than a width thereof.

1 26. The coater of claim 25, wherein the length of the outlet portion is identical to a
2 width of the unit substrate.

1 27. An apparatus for coating a photosensitive layer on a substrate, comprising:
2 a support supporting a substrate having a plurality of unit substrate on which a
3 photosensitive material is coated;
4 a coater including a discharging unit for discharging the photosensitive material onto the
5 unit substrate and a transfer unit for moving the discharging unit along a surface of the substrate,
6 the coater coating the photosensitive layer on the substrate by the unit substrate;
7 a detector disposed in front of the coater, the detector detecting foreign matters on the
8 surface of the substrate;
9 a remover removing the foreign matters detected by the detector; and
10 a controller controlling the coater, the detector, and the remover.

1 28. The apparatus for coating a photosensitive layer of claim 25, wherein the detector
2 includes an image sensor and a signal generator, the image sensor photographing the surface of
3 the substrate and creating an surface image of the surface of the substrate, and the signal
4 generator processing the surface image and generating a signal for operating the remover in case
5 the foreign matters are found on the surface of the substrate.

1 29. The apparatus for coating a photosensitive layer of claim 28, wherein the image
2 sensor includes a camera having a charge-coupled device (CCD).

1 30. The apparatus for coating a photosensitive layer of claim 27, wherein the remover
2 includes an air knife, the air knife injecting a gaseous material to the foreign matters, for thereby
3 removing the foreign matters.

1 31. The apparatus for coating a photosensitive layer of claim 27, wherein the transfer
2 unit includes an interrupter, the interrupter forcibly stopping the transfer unit for preventing the
3 discharging unit from being damaged by residual foreign matters remaining on the substrate after
4 a removing process by the remover.

1 32. The apparatus for coating a photosensitive layer of claim 27, further comprising
2 an inspector disposed in rear of the discharging unit, the inspector inspecting a surface of the
3 photosensitive layer coated on the substrate.

1 33. The apparatus for coating a photosensitive layer of claim 32, wherein the
2 inspector includes an image sensor photographing the surface of the photosensitive layer and
3 creating an surface image of the surface of the photosensitive layer.